

What is claimed is:

1. A shared system resource for use in a networked system to provide services to a plurality of clients communicating with the system resource through a network, comprising:

    a plurality of domains structured as an integrated, cooperative cluster of domains including hierarchically related domains and peer related domains, each domain performing one or more functions supporting the services provided by the system resource, wherein

        hierarchically related domains include a higher level domain and a lower level domain respectively performing higher and lower level operations of one or more related functions supporting the services provided by the system resource,

        peer related domains include parallel domains performing related operations in mutual support of one or more related functions supporting the services provided by the system resource, and

        certain domains including fault handling mechanisms operating independently of and cooperatively with fault handling mechanisms of other domains.

2. The shared system resource for use in a networked system to provide services to a plurality of clients communicating with the system resource through a network of claim 1, wherein a domain comprises:

    peer related domains performing related operations in mutual support of one or more related functions supporting the services provided by the system resource.

3. The shared system resource for use in a networked system to provide services to a plurality of clients communicating with the system resource through a network of claim 1, wherein:

    in a pair of hierarchically related domains,

        the lower level domain includes peer related domains performing related operations in mutual support of related functions of the upper level domain, wherein

            each domain of the peer related domains includes

                a monitoring mechanism for performing a monitoring operation with another peer domain wherein the monitoring operation is related to the operations performed by the other peer domain in support of the functions of the upper level domain, wherein

                    each monitoring mechanism is responsive to detection of a failure in the other peer domain for directing the peer domain in which the monitoring mechanism resides in assuming the operations performed by the peer domain in support of related

functions of the upper level domain independently of operations of the peer domain and independently of a source of the failure in the other peer domain.

4. The shared system resource for use in a networked system to provide services to a plurality of clients communicating with the system resource through a network of claim 1, wherein:

the shared system resource is a file server, and includes

a network domain supporting client/server communications between the file server and a client of the file server,

a storage domain supporting the file transaction operations of the control/processing domain and supporting client file systems, and

a control/processing domain supporting the client/server communications of the network domain and high level file transaction operations and providing communications for file transaction operations between the network domain and the storage domain, wherein

the control/processing domain includes peer processing blade domains performing operations in support of the client/server communications functions of the network hierarchical domain and performing higher and lower level file transaction operations, wherein

each processing blade domain includes hierarchically related domains, including

a higher level domain supporting the client/server operations of the network domain and performing high level file transaction operations, and

a lower level domain performing lower level file transaction operations and supporting communications between the peer processing blade domains,

the higher level and lower level domains of the processing blade domains operating in mutual support in providing communications for file transaction operations between the network domain and the storage domain, and wherein the storage domain includes

a lower domain including storage elements for storing client file systems, and

a higher domain including a peer storage loop domains supporting file transaction communications between each processing blade domain and the lower domain of the storage domain.

5. The shared system resource for use in a networked system to provide services to a plurality of clients communicating with the system resource through a network of claim 4, further comprising:

in the higher level domain of each processing blade domain,

a monitoring mechanism for performing a monitoring operation with the higher level domain of another processing blade domain wherein the monitoring operation is related to the operations performed by the other processing blade domain in support of the functions of the network domain, wherein

each monitoring mechanism is responsive to detection of a failure in the other processing blade domain for directing the domain in which the monitoring mechanism resides in assuming the operations performed by the other processing blade domain in support of related functions of the network domain independently of operations of the other processing blade domain and independently of a source of the failure in the other processing blade domain.